SRF-39FP

SERVICE MANUAL

US Model

Ver 1.0 1999.10

• The following parts are an available for service parts of this model.

PARTS LIST

Part No.	Description	Remark
1-504-812-11	HEADPHONE (TRH-2)	
3-375-760-11	LID, BATTERY CASE	

FM STEREO/AM RADIO

SONY

MICROFILM

9-927-197-11

Sony Corporation
Personal Audio Company

99J0216-1
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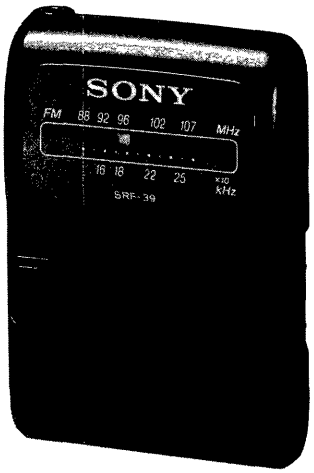
SRF-39

SERVICE MANUAL



US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SPECIFICATIONS

Frequency range	North America FM: 87.6-108 MHz AM: 530-1,710 kHz Other countries FM: 87.6-107.5 MHz AM: 530-1,605 kHz
Intermediate frequency	FM: 1st: 28.4 MHz 2nd: 150 kHz AM: 55 kHz
Antennas	FM: Headphone/earphone cord antenna AM: Built in ferrite bar antenna
Power output	In North America: 3.6 mW + 3.6 mW (at 10% harmonic distortion) with headphones having impedance of 32 ohms at DC operation. In other countries: 4.3 mW + 4.3 mW (at 10% harmonic distortion) with earphones having impedance of 16 ohms at DC operation.
Output	In North America: headphone jack (stereo minijack) load impedance 32 ohms In other countries: earphone jack (stereo minijack) load impedance 16 ohms
Power requirements	1.5 V DC, one R6 (size AA) battery
Battery life	With Sony battery SUM-3 (NS), 40 hours in North America, 35 hours in other countries
Dimensions	Approx. 63 x 91.5 x 26 mm (w/h/d) (2 1/2 x 3 5/8 x 1 1/16 inches)
Weight	Approx. 65 g (2.3 oz) not incl. a battery
Accessories supplied	Stereo headphones (1) in North America or stereo earphones (1) in other countries Belt holder (1)

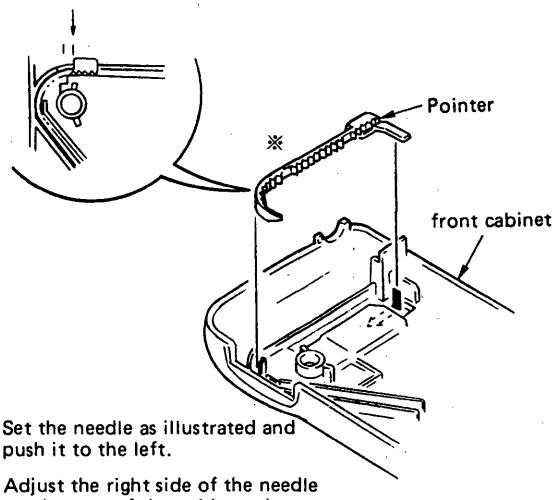
Design and specifications subject to change without notice.

FM STEREO RECEIVER

SONY®

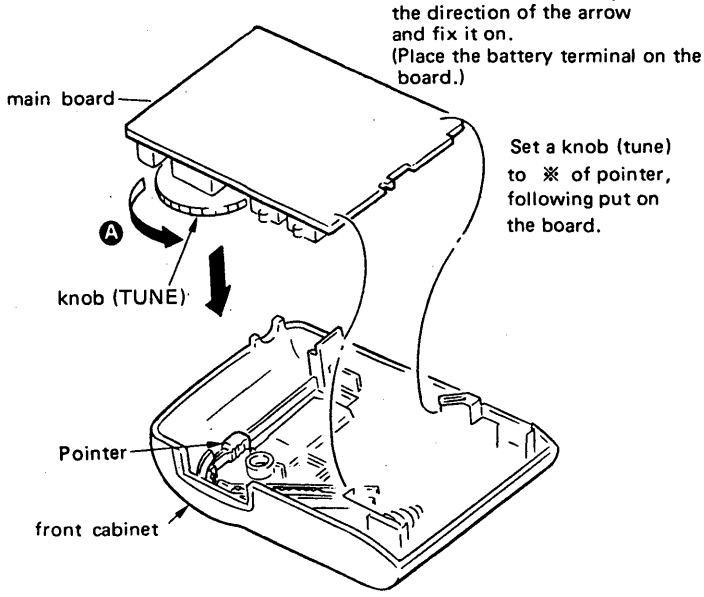
SECTION 1
DISASSEMBLY

POINTER SETTING



❶ Set the needle as illustrated and push it to the left.

❷ Adjust the right side of the needle coming out of the guide to the right marking line of the two on the front cabinet. (Additional figure)


Rotate knob (tune) fully in the direction of the arrow and fix it on. (Place the battery terminal on the board.)
main board
Set a knob (tune) to ※ of pointer, following put on the board.
Ⓐ
knob (TUNE)
Pointer
front cabinet

SECTION 2
ELECTRICAL ADJUSTMENTS

ELECTRICAL ADJUSTMENTS

· Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM Section

BAND selector: FM
FM MODE selector : STEREO (AEP, UK, E, Italian, Australian)
FM SENS selector : DX (US, Canadian)
VOLUME control : mid

FM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a maximum reading on VTVM.		
US, Canadian	86.5 MHz	109.5 MHz
AEP, UK, E, Italian, Australian	87.35 MHz	108.05 MHz
	L6	CT1

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
MIN	MAX
L1	CT2

AM Section

BAND selector: AM
VOLUME control: mechanical mid

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust for a maximum reading on VTVM.		
US, Canadian	520 kHz	1,750 kHz
AEP, UK, E, Australian	520 kHz	1,650 kHz
Italian	516 kHz	1,631.5 kHz
	L3	CT3

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
600kHz	1,400kHz
L5	CT4

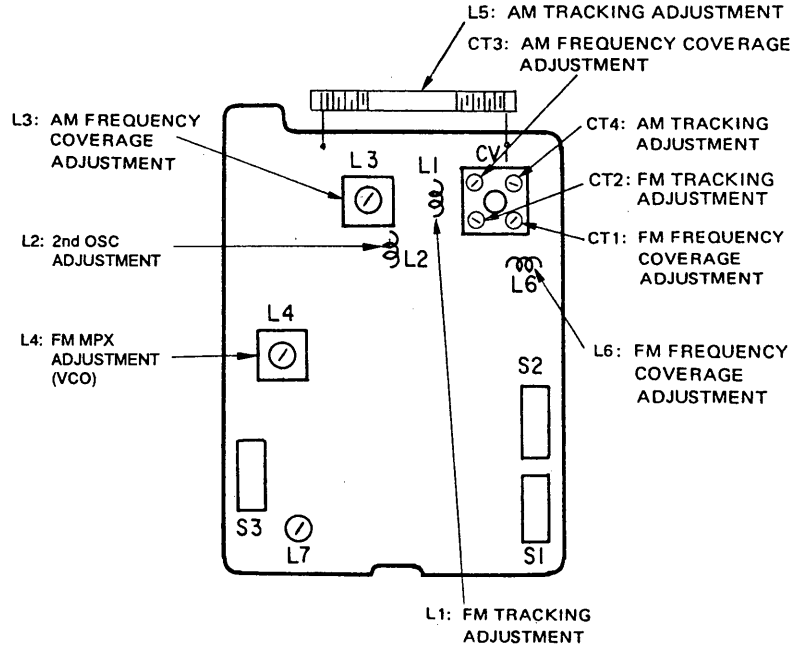
FM MPX ADJUSTMENT (VCO)

1. Connect the frequency counter through 10μF electrolytic capacitor between IC1 pin 11 and ground.
2. Adjustment L4 for the reading of 38kHz±20Hz on the frequency counter.

2nd OSC (57.1MHz) ADJUSTMENT

Adjust L2 for the reading of 56.75MHz±0.25MHz on the frequency counter.

Adjustment Location: MAIN BOARD
— Component Side —

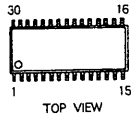


CV1: Pattern Side

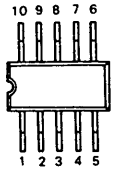
SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

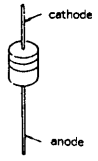
CXA1129N



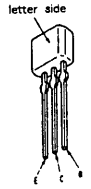
LA4537M



1SS119

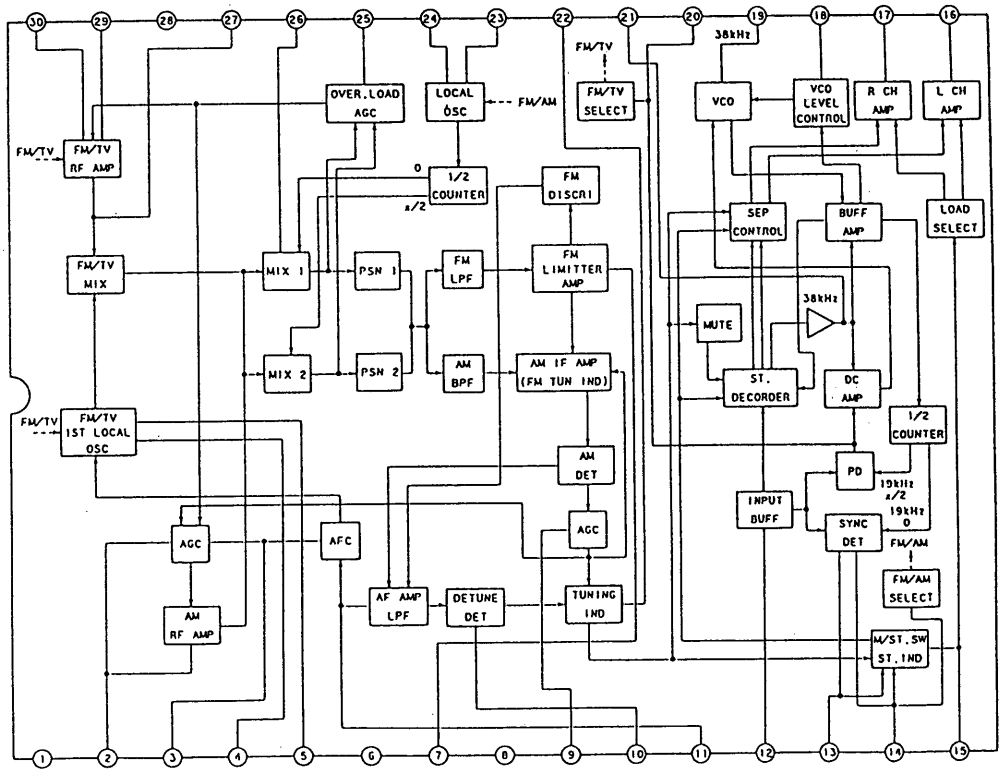


2SA1175-HFE



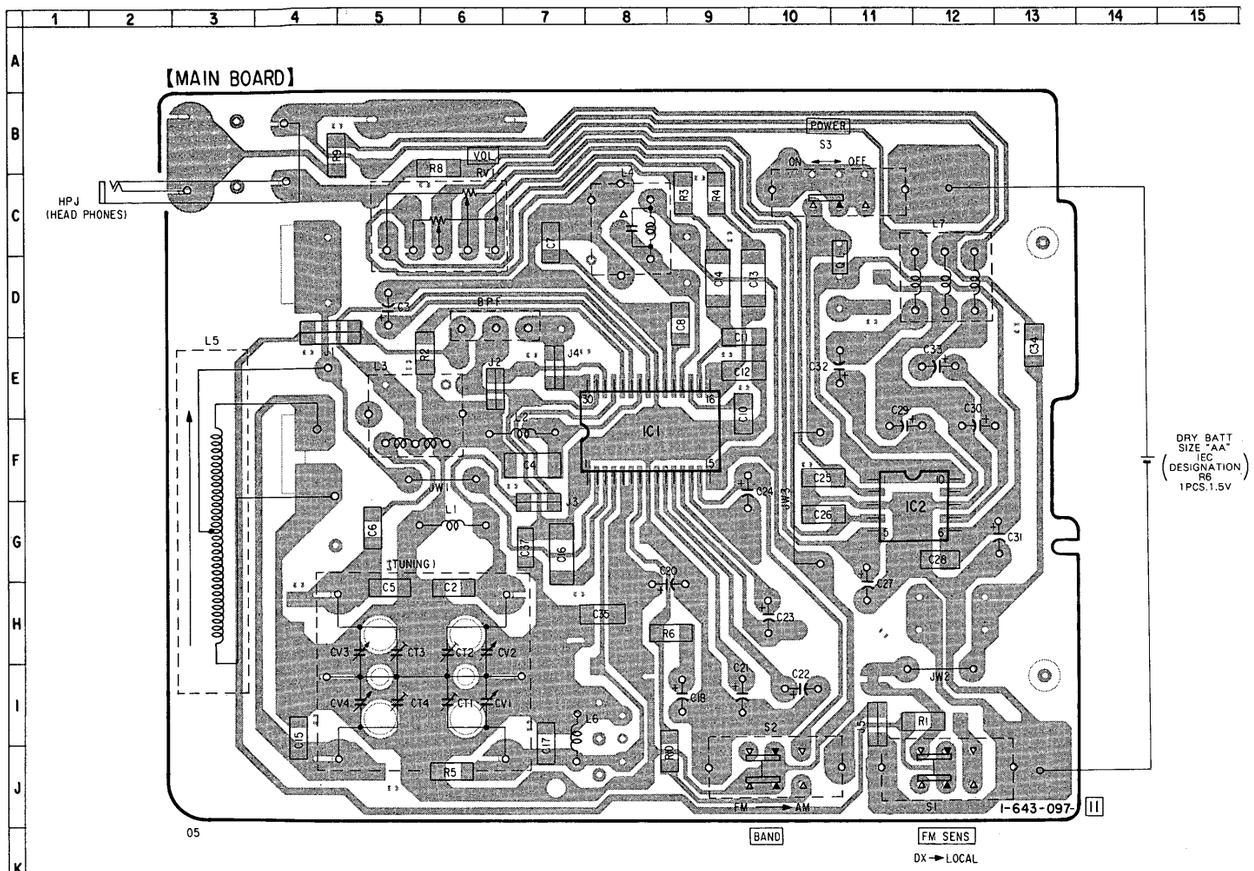
3-2. IC BLOCK DIAGRAM

IC1 CXA1129N



3-3. PRINTED WIRING BOARDS

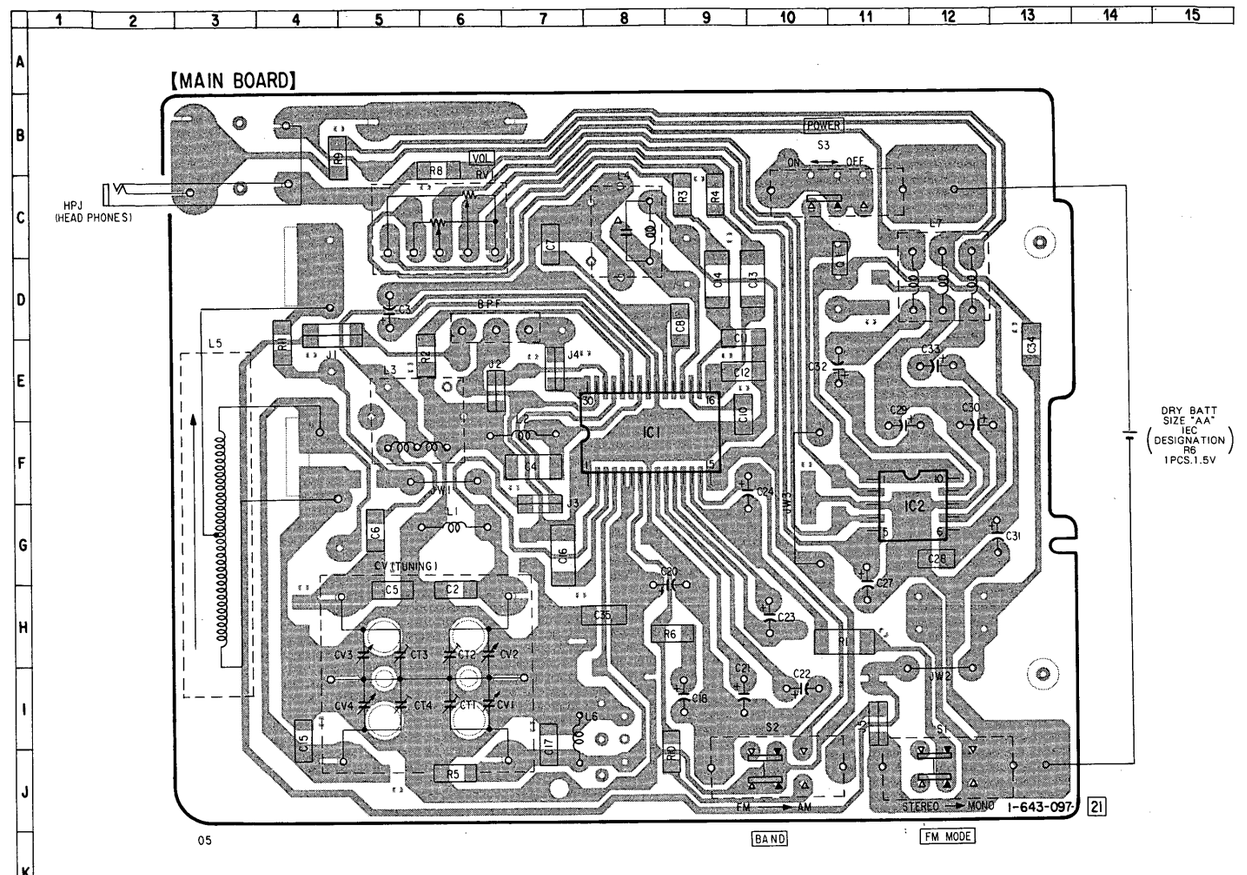
(US, Canadian Model)



- **Semiconductor Location**

Ref. No.	Location
IC1	F-8
IC2	G-11
Q1	D-11

(AEP, UK, E, Australian, Italian Model)



- **Semiconductor Location**

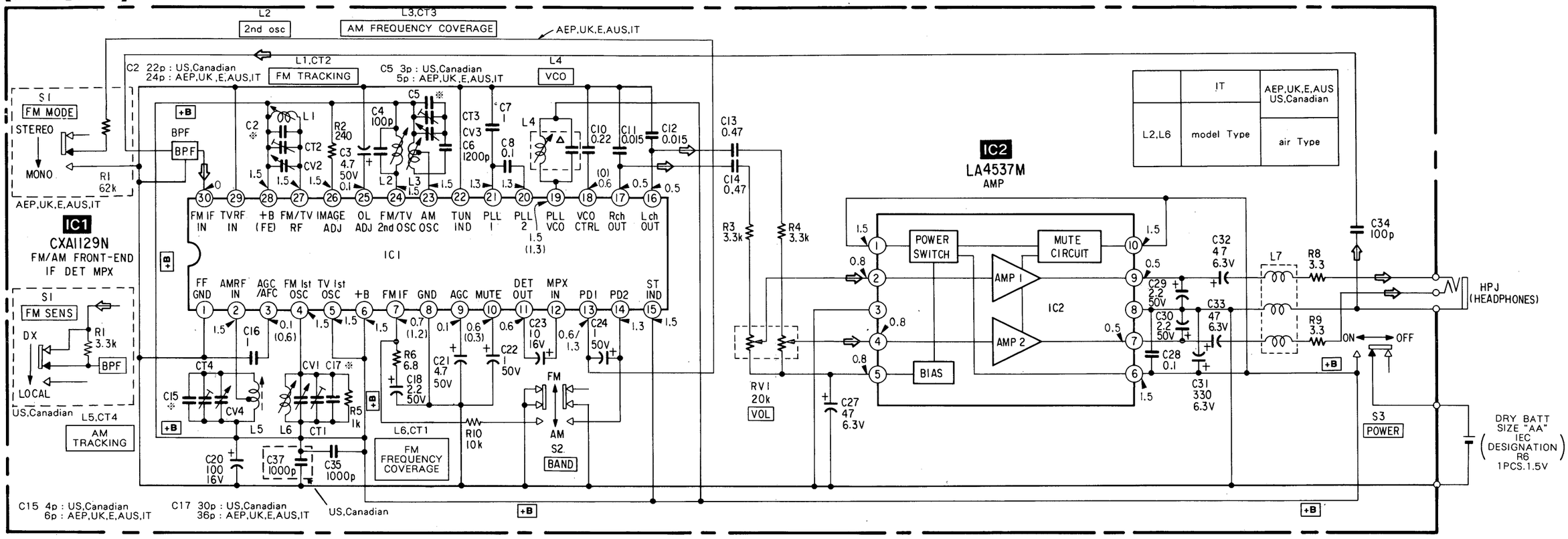
Ref. No.	Location
IC1	F-8
IC2	G-11
Q1	D-11

Note:

- ○——— : parts extracted from the component side.
- △ : internal component.

3-4. SCHEMATIC DIAGRAM

【MAIN BOARD】



05

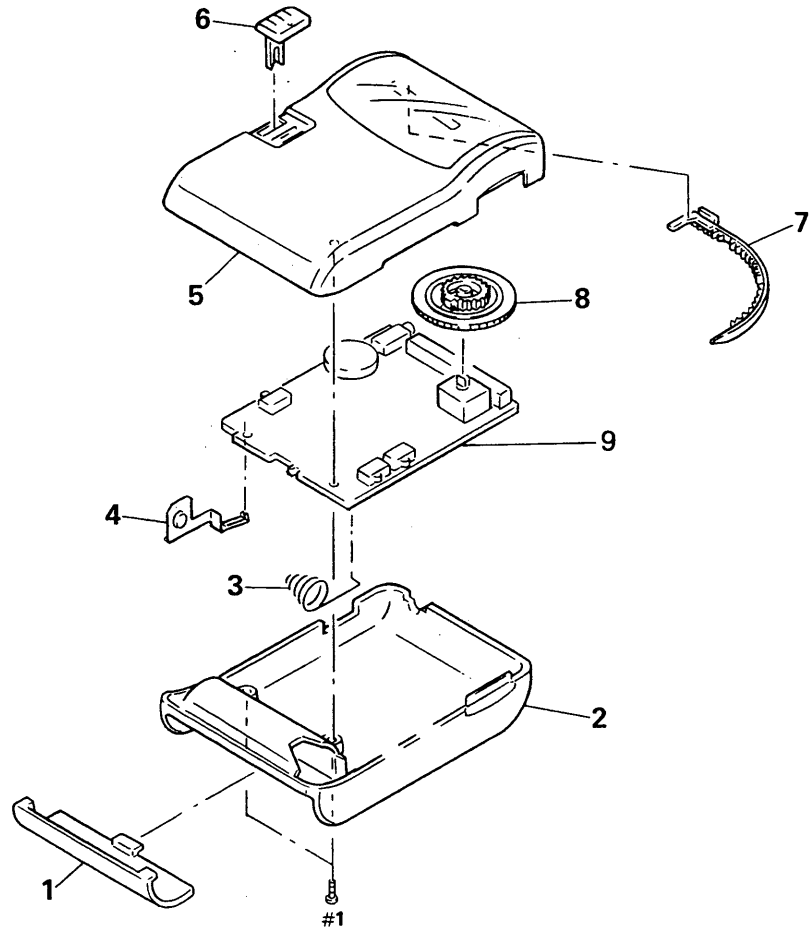
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- B+ : B + Line.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
- Abbreviation
  AUS : Australian
  IT : Italian

SECTION 4
EXPLODED VIEW

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.



Ref. No.	Part No.	Description	Remark
1	3-375-760-01	LID, BATTERY CASE	
2	3-375-763-01	CABINET (REAR) (US, Canadian)	
2	3-375-763-11	CABINET (REAR) (AEP, UK, E, Italian, Australian)	
3	3-375-757-01	SPRING, BATTERY	
4	3-375-756-01	TERMINAL, BATTERY	
5	X-3365-015-1	CABINET (FRONT) ASSY (US, Canadian)	
5	X-3365-018-1	CABINET (FRONT) ASSY (BLACK) (AEP, UK, E, Australian)	
5	X-3365-019-1	CABINET (FRONT) ASSY (WHITE) (AEP, UK)	
5	X-3365-020-1	CABINET (FRONT) ASSY (GREEN) (AEP, UK)	
5	X-3365-021-1	CABINET (FRONT) ASSY (Italian)	
6	3-375-753-01	KNOB (POWER) (BLACK)	
6	3-375-753-11	KNOB (POWER) (WHITE) (AEP, UK)	
6	3-375-753-21	KNOB (POWER) (GREEN) (AEP, UK)	
7	3-375-755-01	POINTER	
8	3-375-767-01	KNOB (TUNE)	
* 9	A-3661-533-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 9	A-3661-536-A	MAIN BOARD, COMPLETE (AEP, UK, E, Australian)	
* 9	A-3661-539-A	MAIN BOARD, COMPLETE (Italian)	

MAIN

SECTION 5
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation AUS : Australian IT : Italian
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-3661-533-A	MAIN BOARD, COMPLETE (US, Canadian)				
		**********				
*	A-3661-536-A	MAIN BOARD, COMPLETE (AEP, UK, E, AUS)				
		**********				
*	A-3661-539-A	MAIN BOARD, COMPLETE (IT)				
		**********				
		< FILTER >				
BPF	1-236-711-21	FILTER, BAND PASS				
		< JACK >				
HPJ	1-563-857-11	JACK, HEADPHONE				
		< CAPACITOR >				
C2	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	(US, Canadian)
C2	1-163-102-00	CERAMIC CHIP	24PF	5%	50V	(AEP, UK, E, IT, AUS)
C3	1-126-163-11	ELECT	4.7uF	20%	50V	
C4	1-163-181-00	CERAMIC CHIP	100PF	5%	50V	
C5	1-163-220-11	CERAMIC CHIP	3PF	0.25PF	50V	(US, Canadian)
C5	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V	(AEP, UK, E, IT, AUS)
C6	1-164-143-00	CERAMIC CHIP	0.0012uF	5%	50V	
C7	1-162-638-11	CERAMIC CHIP	1uF		16V	
C8	1-163-038-00	CERAMIC CHIP	0.1uF	10%	25V	
C10	1-164-222-11	CERAMIC CHIP	0.22uF		25V	
C11	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	
C12	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	
C13	1-162-637-11	CERAMIC CHIP	0.47uF		16V	
C14	1-162-637-11	CERAMIC CHIP	0.47uF		16V	
C15	1-163-087-00	CERAMIC CHIP	4PF		50V	(US, Canadian)
C15	1-163-089-00	CERAMIC CHIP	6PF		50V	(AEP, UK, E, IT, AUS)
C16	1-162-638-11	CERAMIC CHIP	1uF		16V	
C17	1-163-104-00	CERAMIC CHIP	30PF	5%	50V	(US, Canadian)
C17	1-163-106-00	CERAMIC CHIP	36PF	5%	50V	(AEP, UK, E, IT, AUS)
C18	1-124-257-00	ELECT	2.2uF	20%	50V	
C20	1-126-101-11	ELECT	100uF	20%	16V	
C21	1-126-163-11	ELECT	4.7uF	20%	50V	
C22	1-126-301-11	ELECT	1uF	20%	50V	
C23	1-126-157-11	ELECT	10uF	20%	16V	
C24	1-126-301-11	ELECT	1uF	20%	50V	
C27	1-126-154-11	ELECT	47uF	20%	6.3V	
C28	1-163-038-00	CERAMIC CHIP	0.1uF	10%	25V	
C29	1-124-257-00	ELECT	2.2uF	20%	50V	
C30	1-124-257-00	ELECT	2.2uF	20%	50V	
C31	1-124-442-00	ELECT	330uF	20%	6.3V	
C32	1-126-154-11	ELECT	47uF	20%	6.3V	
C33	1-126-154-11	ELECT	47uF	20%	6.3V	
C34	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C35	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	
C37	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	(US, Canadian)
		< VARIABLE CAPACITOR >				
CV1	1-151-700-11	CAP, VAR				
		< IC >				
IC1	8-752-061-76	IC	CXA1129N			
IC2	8-759-822-48	IC	LA4537M			
		< JACK >				
J1	1-216-296-00	METAL CHIP	0	5%	1/8W	
J2	1-216-295-00	METAL CHIP	0	5%	1/10W	
J3	1-216-295-00	METAL CHIP	0	5%	1/10W	
J4	1-216-295-00	METAL CHIP	0	5%	1/10W	
J5	1-216-295-00	METAL CHIP	0	5%	1/10W	
		< COIL >				
L1	1-428-781-11	COIL, AIR-CORE				
L2	1-428-780-11	COIL, AIR-CORE (EXCEPT IT)				
L2	1-460-312-11	COIL (WITH CORE) (IT)				
L3	1-406-477-11	COIL (MW OSC)				
L4	1-406-476-21	COIL (VCO)				
L5	1-402-609-11	ANTENNA, FERRITE-ROD (MW)				

Ref. No.	Part No.	Description	Remark
L6	1-428-778-11	COIL, AIR-CORE (AEP, UK, E, AUS)	
L6	1-428-779-11	COIL, AIR-CORE (US, Canadian)	
L6	1-460-337-11	COIL (WITH CORE) (IT)	
L7	1-409-382-11	COIL, TRAP	
		< TRANSISTOR >	
Q1	1-216-295-00	CONDUCTOR, CHIP	
		< RESISTOR >	
R1	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	(US, Canadian)
R1	1-216-241-00	METAL GLAZE 62K 5% 1/8W	(AEP, UK, E, IT, AUS)
R2	1-216-034-00	METAL CHIP 240 5% 1/10W	
R3	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R4	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R5	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R6	1-216-311-00	METAL CHIP 6.8 5% 1/10W	
R8	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
R9	1-216-304-11	METAL CHIP 3.3 5% 1/10W	
		< VARIABLE RESISTOR >	
RV1	1-241-890-11	RES, VAR, CARBON 20K/20K (VOL)	
		< SWITCH >	
S1	1-571-478-11	SWITCH, SLIDE (FM MODE)	
S2	1-571-478-11	SWITCH, SLIDE (BAND)	
S3	1-571-478-11	SWITCH, SLIDE (POWER)	

****

ACCESSORIES & PACKING MATERIALS

****

	1-504-463-21	HEADPHONE (TRH-10) (AEP, E, IT, AUS)
	1-505-139-11	HEADPHONE (TRH-1) (US, Canadian, UK)
	3-375-762-01	CLIP, BELT
*	3-378-599-01	INDIVEDUAL CARTON (AEP, E, IT, AUS)
*	3-382-301-01	CUSHION (UPPER) (US, Canadian, UK)
*	3-382-302-01	CUSHION (LOWER) (US, Canadian, UK)
	3-754-892-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORUTUGUESE, GERMAN, ITALIAN) (AEP, E, IT, AUS)
	3-754-892-21	MANUAL, INSTRUCTION (ENGLISH) (US)
	3-754-892-31	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (Canadian)
	3-754-892-51	MANUAL, INSTRUCTION (ENGLISH) (UK)

****

Ref. No.	Part No.	Description	Remark

****

HARDWARE LIST

****

#1	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT

English
95C057514-1
Printed in Germany
© 1995. 3

Sony Corporation
Consumer A&V Products Company
Personal A&V Products Div.

9-957-099-12

Published by Home A&V Products Div.
Quality Engineering Dept.